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(54) **METHOD AND APPARATUS FOR MEASUREMENT-BASED CONFORMANCE TESTING OF SERVICE LEVEL AGREEMENTS IN NETWORKS**

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(57) **ABSTRACT**

A method and apparatus for measurement-based conformance testing of service level agreements in networks. The method includes first collecting quality of service information from network traffic over a plurality of network nodes. Then, the collected quality of service information is compared to a plurality of specified quality of service levels. A plurality of possible virtual quality of service pathways through a plurality of network nodes is provided, based on the compared quality of service information. One embodiment of the method includes the additional step of creating a virtual connection using the compared quality of service information. In another embodiment of the method, the step of collecting quality of service information from network traffic over a plurality of network nodes includes first transmitting test traffic from a source to a destination over a plurality of network nodes. The transmitted test traffic is then received at the destination, and quality of service information is identified by comparing characteristics of the test traffic transmitted by the source to characteristics of the test traffic received by the destination.

12 Claims, 8 Drawing Sheets